

PACIFIC

INTERPROFESSIONAL

diabetes

CLINIC

Clinica

Multiprofesional

Para la Diabetes

Interprofessional Services

- Eye and Vision Care | *Cuidado de Los Ojos y de La Visión*
- Dental Hygiene | *Higiene Dental*
- Medical Services | *Servicios Médicos*
- Mental Health Care | *Cuidado de la Salud Mental*
- Occupational Therapy | *Terapia Ocupacional*
- Pharmacy | *Farmacia*
- Physical Therapy | *Terapia Física*

Inaugural IDC - June 12th



Upcoming Saturday IDC Dates

- September 25
- October 16
- November 6
- December 11

Interprofessional Diabetes Care: A Unique Model

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An Interprofessional Student Group

Overview of Diabetes

- Lack of adequate blood glucose regulation, results in chronic hyperglycemia

All organ systems are affected, leading to complications such as:

- Eyes: retinopathy and glaucoma
- Teeth: periodontal disease
- Vascular: heart attack and stroke
- Nervous system: neuropathy
- Extremities: loss of sensation, poor wound healing
- Kidneys: nephropathy, end-stage renal disease
- Mental health: depression

Part 1

- *Maria G* is a 46-year-old Latino female referred to the Interprofessional Diabetes Clinic by her primary care provider for her annual diabetic eye exam, including a dilated retinal evaluation. She was diagnosed with diabetes 10 years ago. She reported taking Metformin (1000 mg 2X/day); Simvastatin (40mg /day); aspirin (81 mg 3-5X/week) for shoulder pain and carpal tunnel syndrome; Vicodin for back pain, and albuterol daily for asthma.
- At the time of the intake evaluation, she was 5 feet, 1 inch tall and 208 lbs (BMI 39.3 kg/m²). In office Random Blood Sugar (RBS) measured 282 mg/dl, and Blood Pressure (BP) was 145/105 mmHg. Morning fasting BS was reported as 174, and HA1c was 6.6, measured 3 months ago. Her medical history also included high cholesterol and asthma.
- Family history: mother and 2 brothers have diabetes.

Discussion #1: Assessment

1. What do you know?
2. What do you need to know?
3. What will be the focus of each discipline in helping Maria today?

Optometric Evaluation:

- Last eye exam was 6 years ago.
- Chief Complaint is vision blurry and eyes burn, especially while reading. Uses drugstore readers but gets headaches. Visual needs include driving, reading, and housework.
- She denies tobacco, drug or alcohol use.

Assessment:

1. Hyperopia, Astigmatism and Presbyopia
2. Dry eye symptoms
3. Mild Diabetic Retinopathy
4. Glaucoma suspect (?)









Optometry Plan

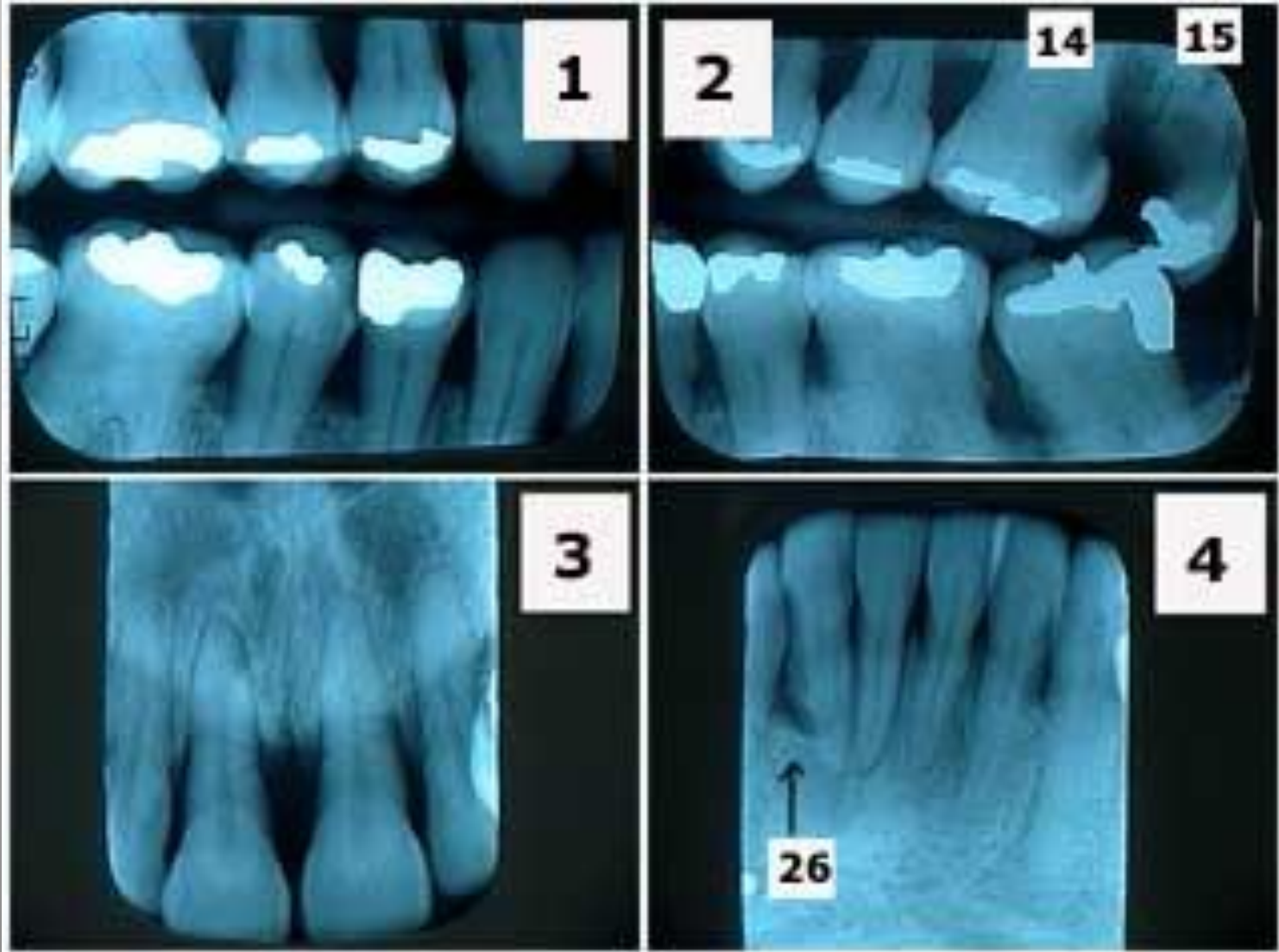
1. Rx bifocal spectacles with astigmatic correction; improves visual acuity to 20/20
2. Dispense Systane Artificial Tears qid
3. Educated patient on findings and importance of blood glucose control, medication adherence, and diet
4. RTC 6 months for dilated retinal exam and follow-up glaucoma suspect evaluation
5. Report to Primary Care Provider

Dental Assessment:

- Last visit to a dentist was over 10 years ago in Mexico
- Chief complaint is that her gums bleed and it hurts to brush
- Moderate-severe periodontal (gum) disease, 2 large cavities, and avoids chewing on the left side of her mouth
- Moderate fear of dentistry



Radiographs



Periodontal Charting

Normal	323	323	323	323	323	323	323	323	323	323	323	323	323	323
Facial max	545	645	545	545	535	544	646	634	534	434	454	645	547	746
Lingual max	546	645	545	545	535	544	646	634	534	434	434	545	547	746
Facial mand	645	444	636	645	544	435	535	444	434	545	545	546	646	655
Lingual mand	545	444	566	645	644	435	534	545	446	644	645	545	547	646

Generalized bleeding on probing

Dental Plan

1. Medical Consult
2. Dental Anxiety Questionnaire
3. Oral Hygiene Instruction & nutritional counseling
4. Education on findings and importance of blood glucose control, medication adherence
5. Scaling and root planing (deep cleaning) with anesthetic (pending BP control)
5. Fluoride treatment
7. Referral to dentist for restorative care and periodontist after initial therapy
8. Report to physician and dentist

Medication History

- Forgets metformin, simvastatin, and aspirin 2-3x/wk.
- Does not know indication of meds or use adherence tools.
- Daily symptoms of asthma requiring use of albuterol.
- Pain level 4/10 on right foot and does not like to use vicodin.
- OTC Ibuprofen daily for pain.
- Checks blood glucose 2-3x/wk at random times of day.
- Food choices high in sodium and saturated fat.
- Does not know certain foods cause hyperglycemia.
- No diabetes education.

Medical Records from PCP

- PMH: DM, HTN, dyslipidemia, mild persistent asthma.
- Vitals:

BP	Date
136/90	5/24/10
140/94	5/11/10
- Labs: 3/22/10
LDL 132; HDL 44; TG 201, TC 16
HbA1c 6.6
Electrolytes, renal function, liver function, & thyroid - WNL.
- Last dental exam, dilated eye exam, and immunization history unavailable.

Pharmacy Evaluation

- At HbA1c goal < 7%, but...
- Limited knowledge of drug therapy and disease
 - Medication non-adherence and low health literacy
- No formal diabetes education classes since diagnosis.
 - Healthy eating, being active, monitoring, taking medications, problem solving, healthy coping
- Uncontrolled hypertension, dyslipidemia, and asthma
- Drug therapy related problems
 - No drug therapy for treatment of hypertension
 - Suboptimal dose for treatment of dyslipidemia
 - Possible worsening of hypertension secondary to chronic use of OTC ibuprofen.
 - Suboptimal therapy for treatment of asthma
- Lack of immunization history
 - Influenza, pneumococcal

Pharmacy Plan & Recommendations

1. Diabetes education class and optimize metformin.
2. Pill box to improve adherence.
3. ACE-inhibitor for BP lowering and kidney protection.
4. Pain evaluation and alternative drug therapy to ibuprofen.
5. Optimize simvastatin and TLC to achieve LDL goal.
6. Inhaled corticosteroid for chronic treatment to avoid overuse of albuterol.
7. Pneumococcal & annual influenza if not current.

Discussion #2: Treatment Plan

1. How would you communicate the treatment plan with Maria?
2. Discuss how you would address Maria's compliance/adherence with the treatment plan, particularly diet recommendations.
3. Identify and discuss the obstacles to effective implementation of the plan.
4. How do the plans complement each other and/or conflict to support optimal outcomes?

Physical Therapy Examination

- During the PT examination, Maria's primary complaint was right foot pain, which has been long-standing (several years) and is increased with weight bearing. The pain has limited her ability to walk to household distances. For longer distances, she inconsistently uses a cane in her right hand.

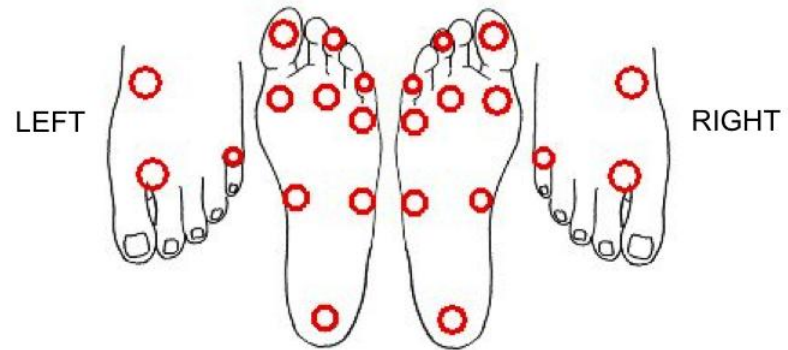
Physical Therapy Examination

- Gait assessment revealed an antalgic pattern with a single point cane (right hand) and decreased weight bearing on the right foot.




.Results of the diabetic foot screen showed an absence of protective sensation, more severe on the right than the left foot.

Note the level of sensation in the circles:

⊕ = Can feel the 5.07 filament — = Can't feel the 5.07 filament



Skin Conditions on the Foot or Between the Toes:

Draw in: Callous , Pre-ulcer , Ulcer  (note length and width in cm)
Label with: **R** - redness, **M** - maceration, **D** - dryness, **T** - Tinea

Occupational Therapy Assessment

- Occupational Interests & History: family care, walking (2 mi/day), hiking, bicycling, embroidery, cooking, and church-related activities, independent ADL/IADL (self- & home-care and community mobility)
- Current Functional Challenges:
 - Activity level decreased for all interests & social participation, due to pain & lower endurance;
 - Sleep disruption related to pain and worry
 - Transportation challenges; Relies on family for transport and assistance with ADL/IADL
 - Can't kneel in church, too painful, embarrassing
 - Summary: spiraling activity loss increases symptoms

OT Assessment (continued)

- UE status:
 - Hx of CTS (Carpal Tunnel Syndrome) and surgery on R dominant wrist with partial relief
 - Shoulder pain
 - Hand neuropathy/sensory impairment with related decrease in coordination & grip/pinch strength
 - intermittent hand edema and distal pain, especially when walking longer distances
 - Functional implication is difficulty in: giving herself prescribed eye drops, brushing teeth/flossing; cutting vegetables/cooking; housekeeping

Psychological Assessment

- Psychosocial History
 - Most family in Mexico, lives with niece; feels she is “a burden” to her; has few friends, feels “ashamed” to go out; finds her diabetes regiment hard to follow
- General Psychopathology
 - History of “worries”; feels “shaky” often; “loses control” around food at times
- Depression:
 - BDI score = 21/63
- Diabetes Distress Scale
 - Clinical range on all 4 scales: Emotional Burden; Physician Related Distress; Regiment Related Distress; Interpersonal Distress

Questions:

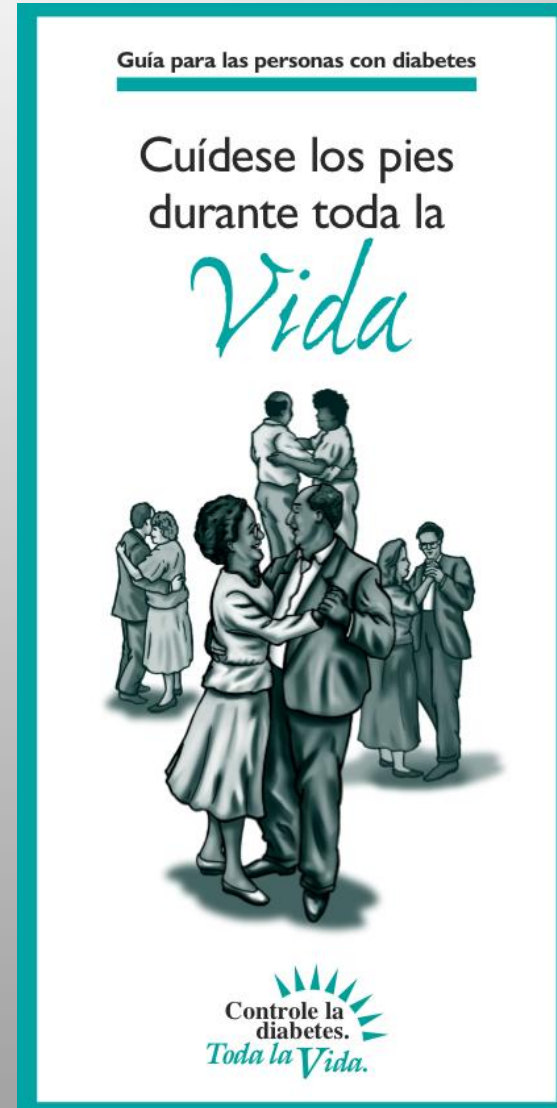
1. What additional information do you know?
2. What will be the focus of PT, OT, & Psychological services in helping this patient?
3. How do you present an integrated interprofessional treatment plan to the patient?
4. How do the plans complement each other and/or conflict to support optimal outcomes?

OT Plan

- Home evaluation
 - Accessibility, safety, & modifications
- Adaptations & Lifestyle Redesign
 - Modified eye drop dispenser
 - Built up handles (kitchen utensils, toothbrush, etc)
 - Referral to TriMet's *Ride Connection* program
 - Firm, padded cushion for kneeling
 - Incremental activity plan (leisure, home care, church)
 - Menu planning/ cooking modifications
- UE Program: shoulder mobility & shoulder & hand strengthening & activities
- Overall Goal: Increase satisfaction and quality of life by helping her improve her occupational engagement

Physical Therapy Plan of Care

- Diabetic foot care education
- Gait training with single point cane



Psychology Plan

- Psychoeducation
 - Rationale: confusion/distress over managing diabetes
 - Goal: differentiate between physiological/physical symptoms; increase agency in managing diabetes
- Psychotherapy
 - Rationale: Patient endorsing depressed/anxious thoughts, feelings and behaviors
 - Goal: Increase access to positive reinforcers; teach adaptive relaxation and coping skills

Summary: Unique Advantages of the Interprofessional team

- More comprehensive patient history and life story develop when gathered within the different contexts of each profession that aid in developing a more comprehensive treatment plan
- Easier to thoroughly identify inconsistencies, patient omissions, symptoms, and behaviors
- More opportunities for both patient and providers to identify and address key barriers to successful self-management
- Consistent, coordinated patient education for medication, diet, activity/exercise regimen is delivered from all providers
- Coordinating, prioritizing, and modifying treatment plans as a team optimizes quality of care and quality of life